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ROBERT A. MCLAUCHLAN, KOESTNER BERTANI, LLP;
P.O. BOX 26780
AUSTIN, TX 78755

EXAMINER

LY, NGH I H

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/733,235

Applicant(s)

FORMAN ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 and 41-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 41-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/18/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 (filed 08/31/2004) is objected to because of the following informalities:

Claim 1, page 7, line 4, recites "SATMCOM" should be changed to SATCOM.

Appropriate correction is required.

Drawings

2. The drawings (fig.1 and fig.5A) were received on 08/13/2004. These drawings are acceptable.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 8, 10-12, 14, 20-22, 25-31, 37, 38, 41, 42, 46, 49, 50 and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by Chandos et al (US 6,240,074).

Regarding claims 1, 20-22, 25, 28, 29 and 41, Chandos teaches a system operable to augment tactical (line of sight (LOS)) (see column 3, lines 36-39, "line of sight") communications with satellite communications (SATCOM) (see column 1, lines 6-11 and see column 2, lines 48-64), comprising: at least one SATCOM transceiver operable to perform two-way communication with SATCOM service (see fig.1, two-way

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communication 46), tactical communication system (see fig.1, tank 68 and solder 68 with a gun and see column 3, lines 40-42, "AWACS"), and an interface unit operably coupled to the at least one SATCOM transceiver and the tactical communication system (see fig.2 for details of hub 10, see column 3, lines 40-42, "hub 10 maybe located on and aircraft such as an AWACS"), where the interface unit further comprising a computer processor that executes instructions for: sending and receiving data from the at least on SATCOM transceiver, and sending and receiving data from the tactical communications system and wherein the interface unit allows data to be transferred between the tactical communication system, at least one SATCOM transceiver, and the SATCOM service (see fig.1, fig.2 and column 2, line 48 to column 42, the teaching of Chandos inherently teaches Applicant's claimed limitations).

Regarding claims 2 and 38, Chandos further teaches the at least on SATCOM transceiver comprises commercial off-the-shelf transceiver (see fig.1, satellite 42).

Regarding claims 3, 26, 27, 31 and 37, Chandos further teaches the communications system further comprises an intercom and the onboard interface unit further comprises a sound-card operably coupled to said computer processor and the intercom, the sound card being is operable to: communicate two-way data with the computer processor and communicate two-way voice data with intercom (see column 5, lines 20-25 and column 8, lines 16-20 and see fig.1, two-way communication).

Regarding claims 4, 42 and 46, Chandos further teaches the onboard interface unit comprises a video card coupled to said processor and the display, wherein the

video card is capable of: send and receive data from the computer process, send and receive data from the display (column 3, lines 30-34, see "message").

Regarding claims 8, 10-12, 14, 49, 50 and 53, Chandos further teaches the tactical communications system further comprises a tactical transceiver operably couple to the interface unit (see fig.2) wherein the interface unit allows data to be transferred between the tactical communication system and tactical recipients through the tactical transceiver (see fig.1, tank 68 and solder 68 with a gun and see column 3, lines 40-42, "AWACS").

Regarding claim 30, Chandos further teaches the step of communicating two-way data with a commercial SATCOM network from an off-board transceiver further comprises communicating data from a stationary ground command (see fig.1, command center 58).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7, 16, 18, 23, 24, 33, 45, 47, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) in view of Lemelson et al (US 6,084,510).

Regarding claims 7, 23, 24 and 45, Chandos teaches the display (see column 3, lines 30-34). Chandos does not specifically disclose the display is a multi-function display set (see column 3, lines 30-34).

Lemelson does not specifically disclose the display is a multi-function display set (see fig.10, 162 and see column 8, lines 48-57 and column 16, lines 1-7).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Lemelson into the system of Chandos in order to permit more comprehensive scanning and transmission only of signals for which it has been determined that a dangerous situation may be exist (see Lemelson, column 16, lines 21-24).

Regarding claims 16, 18, 33 and 47, Chandos teaches voice data (see column 5, lines 20-25 and column 8, lines 16-20). Chandos does not specifically disclose the weather data is communicated.

Lemelson teaches the weather data is communicated (see column 3, lines 29-37).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Lemelson into the system of Chandos in order to provide danger warning and emergency response system (see Lemelson, column 3, lines 29-37).

Regarding claim 54, Chandos teaches claim 1. Chandos does not specifically disclose the navigation system is a GPS system.

Lemelson teaches the navigation system is a GPS system (see abstract and see column 9, lines 34-58).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Lemelson into the system of Chandos in order to determine the location of mobile station.

Regarding claim 55, Chandos teaches claim 1. Chandos does not specifically disclose a storage device in electrical communication with the computer processor, the computer processor capable of communicating two-way data with the storage device.

Lemelson teaches a storage device in electrical communication with the computer processor, the computer processor capable of communicating two-way data with the storage device (see column 15, lines 57-67).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Lemelson into the system of Chandos in order to prevent data from being lost.

8. Claims 5, 6, 9, 13, 15, 17, 19, 32, 34, 43, 44 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) in view of admitted prior art.

Regarding claims 5, 6, 43 and 44, Chandos teaches the system of claims 4 and 42. Chandos does not specifically disclose the video card is capable of communicating SVGA data or RS-170 data. Applicant admitted in the instant specification (see 7, lines 29-30, page 11 line 32 to page 12 line 2 and page 10, line 33 to page 11, line 1) that the use of SVGA data or RS-170 data is very well known in the art and it would have been obvious to one of ordinary skill in the art to provide a video card is capable of communicating SVGA data or RS-170 data for the benefit of transmitting and displaying information using commercially available standards.

Regarding claims 9 and 13, Chandos teaches the tactical transceiver as claimed (see claim 1 above). Chandos does not specifically disclose the tactical transceiver is a UHF/VHF radio or the bus is a Mil-Std-1553 bus. Applicant admitted in the instant specification (see 7, lines 29-30 and see page 12, lines 3-6) that the use of UHF/VHF radio or Mil-Std-1553 bus is very well known in the art and it would have been obvious to one of the ordinary skill in the art to provide UHF/VHF radio or Mil-Std-1553 bus for the benefit of two-way voice data and mission data communications using commercially satellite network.

Regarding claims 15, 17, 19, 32 and 34, Chandos teaches the voice data (see column 5, lines 20-25 and column 8, lines 16-20) is communicated. Chandos does not

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specifically disclose the using threat or target data is communicated. Applicant admitted in the instant specification (see page 13, lines 6-8 and see column 13 lines 19-21) that the use of threat or target data is very well known in the art and it would have been obvious to one of the ordinary skill in the art to provide threat data or target data for the benefit of monitoring threat or target during combat in military operations.

Regarding claim 57, Chandos teaches the apparatus of integrating commercial satellite communication technology with military aircraft communications technology as claimed (see column 1, lines 6-11). Chandos does not specifically disclose a voltage converter in electrical connection with computer processor and the voltage converter capable of providing electrical power to the computer processor. Applicant admitted in the instant specification (see page 12, lines 12-13) that the use of voltage converter capable of providing electrical power to the computer processor is very well known in the art and it would have been obvious to one of ordinary skill in the art to provide a voltage converter in electrical connection with computer processor and capable of providing electrical power to the computer processor for the benefit of providing electrical power to the computer processor in the system of Lemelson.

9. Claims 48 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) and Lemelson et al (US 6,084,510) in view of admitted prior art.

Regarding claim 48, the combination of Chandos and Lemelson teaches the system as claimed. The combination of Chandos and Lemelson does not specifically

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disclose the radio is a UHF/VHF radio. Applicant admitted in the instant specification (see 7, lines 29-30 and see page 12, lines 3-6) that the use of UHF/VHF radio is very well known in the art and it would have been obvious to one of the ordinary skill in the art to provide UHF/VHF radio for the benefit of two-way voice data and mission data communications using commercially satellite network.

Regarding claim 56, the combination of Chandos and Lemelson teaches the system as claimed. The combination of Chandos and Lemelson does not specifically disclose the storage device is a flash hard drive. Applicant admitted in the instant specification (see page 11, lines 25-28) that the use of a flash hard drive is very well known in the art and it would have been obvious to one of the ordinary skill in the art to modify the above teaching of the combination of Chandos and Lemelson as claimed, in order to provide a method for storing data.

10. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) in view of Hart (US 5,410,739).

Regarding claim 35, Chandos teaches the step of communicating two-way data with a commercial SATCOM network from an onboard commercial transceiver (see fig.1). Chandos does not specifically disclose communicating status data.

Hart teaches communicating status data (see column 1, line 60 to column 2, line 5 and see column 3, lines 43-56).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Hart into the system of

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Chandos in order to know a variable physiological status of the pilot (see Hart, column 1, lines 63-64).

11. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) in view of Vian (US 6,114,976).

Regarding claim 36, Chandos teaches the step of communicating two-way data with a commercial SATCOM network from an onboard commercial transceiver (see fig.1). Chandos does not specifically disclose communicating ejection data.

Vian teaches communicating ejection data (see column 2, lines 46-65).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Vian into the system of Chandos in order to determine whether or not for the given set of aircraft conditions, an ejection is appropriate (see Vian, column 2, lines 56-58).

12. Claims 51, 52, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandos et al (US 6,240,074) in view of Lemelson et al (US 6,084,510) and Frazier, Jr. et al (US 6,271,768).

Regarding claim 51, Chandos teaches claim 41. Chandos does not specifically disclose a bus in electrical connection with the computer processor.

Lemelson teaches a bus in electrical connection with the computer processor (see column 17, lines 55-61).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Lemelson into the system of Chandos in order to implement the neutral network computing function (see Lemelson, column 17, lines 59-61).

The combination of Chandos and Lemelson does not specifically disclose the computer processor communicates with the mission data processor.

Frazier teaches the computer processor communicates with the mission data processor (see column 8, lines 14-25 and see column 10, lines 5-20).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Frazier into the system of Chandos and Lemelson in order to track a specific formation aircraft (see Frazier, column 10, lines 10-20).

Regarding claim 52, see claim 13 for the teaching of Chandos and applicant's admitted prior art.

Regarding claim 58, the combination of Chandos, Lemelson and Frazier teaches claim 51. The combination of Chandos, Lemelson and Frazier does not specifically disclose a test port in electrical connection with the computer processor. The concept of a test port in electrical connection with the computer processor is very well known in the art and examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art to provide a test port in electrical connection with the computer processor for the benefit of testing communication equipment in the system of Chandos, Lemelson and Frazier.

Regarding claim 59, the combination of Chandos, Lemelson and Frazier teaches the apparatus of integrating commercial satellite communication technology with military aircraft communications technology (see column 11, lines 19-24 and column 16, lines 32-37) instead of the test port is a RS-232 port as claimed. However, using the test port is a RS-232 port is known in the art. Therefore, it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Chandos, Lemelson and Frazier as claimed, in order to improve the test port.

Response to Amendment

13. Applicant's arguments with respect to claims 1-38 and 41-59 have been considered but are moot in view of the new ground(s) of rejection.

On page 19 of Applicant's remarks, Applicant argues that Lemelson fails to teach two-way satellite communications to the end device.

The Examiner, however, disagrees. Lemelson in deed teaches two-way satellite communications to the end device (see Lemelson, fig.1, two-way satellite communications between satellite 8 and aircraft 8 (link 22d) or ground based stationary 14 (link 22a)). In addition, Chandos (a newly cited reference) teaches Applicant's two-way tactical communications to the end device.

On pages 21 and 22 of Applicant's remarks, Applicant argues that Lemelson fails to teach claims 7, 16, 18, 23, 24, 33, 40, 45, 47, 54 and 55.

In response, Chandos (a newly cited reference) teaches Applicant's two-way tactical communications to the end device (see Chandos, fig.1), and the combination of

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Chandos and Lemelson indeed teaches claims 7, 16, 18, 23, 24, 33, 40, 45, 47, 54 and 55.

On pages 24, of Applicant's remarks, Applicant argues that there is no motivation, teaching or suggestion to combine Lemelson with the cited prior art.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to do so found in the knowledge generally available to one of ordinary skill in the art (see the motivations provided by the Examiner of claims 5, 6, 9, 13, 15, 17, 19, 32, 34, 43, 44 and 57 above).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

10/16/04
12/17/04

Charles Appiah
CHARLES APPIAH
PRIMARY EXAMINER